# CURRICULUM DEVELOPMENT GUIDELINE FOR DENTAL ASSISTANT AND REGISTERED DENTAL ASSISTANT FUNCTIONS

## I. GENERAL PROVISIONS

These basic guidelines are a means of assisting the instructor of dental assistant (DA) and registered dental assistant (RDA) functions.

Education should include classroom, laboratory, and clinical experience with faculty instruction and supervision. Instructional aids, such as slides, videotapes, and models or manikins, should be available for use in classroom instruction and demonstration. Instrumentation experience with models or manikins shall be provided to assure that students have basic proficiently prior to clinical experience with patients. students shall be provided with sufficient clinical experience with a variety of patients to obtain competency in all functions approved by the Board for performance by dental assistants and registered dental assistants and tasks taught. Instruction for all procedures should include correct positioning of the patient and sterilization and proper storage of all instruments.

## II. INSTRUCTION GUIDELINES FOR DA/RDA

Each institution must establish a mechanism to ensure adequate asepsis, infection and hazard control incident to the delivery of patient care. A written asepsis, infection and hazard control clinic/laboratory protocol for each procedure must be developed, monitored and made available to all students, attending faculty and appropriate support staff.

Mechanism must be established for monitoring the compliance with this protocol within the institution and affiliated sites. Periodic review and monitoring of the procedures and facilities should be conducted to ensure proper compliance.

Students should be tested for proficiency by written and practical examination at the end of instruction for each procedure.

Students should be informed that they must have certification of having passed a board approved course in radiation safety, coronal polishing and/or use of the ultrasonic scaler prior to performing those procedures and only RDAs (rather than DAs) may do coronal polishing and use the ultrasonic scaler..

## A. OPERATE DENTAL RADIOGRAPHIC EQUIPMENT FOR THE PURPOSE OF ORAL RADIOGRAPHY

1. Performance Goal. The student shall be able to make radiographic surveys that can be used effectively in diagnosis without exceeding three re-exposures per FMX surveys of patients with permanent dentition, mixed dentition, primary dentition and, if possible, of edentulous patients.

2. Content. Instruction should include:

   a. Principles of radiation safety and hygiene

   b. Fundamentals of radiographic techniques for periapical, occlusal and bitewing exposures

   c. Anatomy of the oral cavity and head which directly relates to making radiographic exposures

   d. Tooth morphology which directly relates to making radiographic exposures

   e. Principles of selecting film, determining exposures and operating equipment

   f. Identification and correction of technique errors

   g. Laboratory and clinical practice in making radiographic surveys, applying principles of x-radiation

3. Cognitive Objective. The student shall know the principles of radiographic techniques and x-radiation hygiene, as well as technique performance. Students should be able to apply the fundamentals of radiation safety and consistently make radiographic surveys which can be used effectively in diagnosis.

   Student will expose, process, mount and evaluate x-rays of a manikin and patients.

## B. TAKE IMPRESSIONS FOR DIAGNOSTIC AND OPPOSING MODELS

1. Performance Goal. The student shall be able to take impressions of maxillary and mandibular arches for diagnostic and opposing models which have adequate extension and detail without distortion.

2. Content. Instruction should include:

   a. Principles of tray selection

   b. Technique of taking impressions; i.e., insertion, stabilization, retention, removal, precautions, proper infection control, and care of impression once taken

   c. Criteria for evaluating quality of the impression

3. Cognitive Objectives. The student shall know:

   a. Use of primary impression

   b. Characteristics of good primary impression

   c. Common errors in taking primary impression

   d. Criteria for tray selection

## C. APPLY NON-AEROSOL AND NON-CAUSTIC TOPICAL AGENTS

1. Performance Goal. The student shall be able to prepare armamentarium for and apply topical agents to the appropriate area of the oral cavity following precautions indicated for each particular agent.

2. Content. Instruction should include:

   a. Armamentarium for application of topical agents

   b. Contraindications

   c. Precautions

   d. Technique

3. Cognitive Objectives. The student shall know:

   a. Primary reasons for using each type of topical agent

   b. Contraindications for use of topical agents

   c. How to prevent dilution of topical agents in the mouth

d. Criteria and steps for proper application of specific topical agents

## D. PLACE AND REMOVE DRESSINGS (POST-EXTRACTION AND PERIODONTAL)

1. Performance Goal. The student shall be able to prepare, place and remove post-extraction and periodontal dressings without tissue trauma or unnecessary patient discomfort.

2. Content. Instruction should include:

a. Armamentarium for placement and removal of post-extraction and periodontal dressings

b. Technique

c. Precautions

d. Dry socket management

(1) Causes and characteristics

(2) Steps for such procedure

(3) Preparation of materials

(4) Post-operative instruction

(5) Aseptic techniques

e. Periodontal dressings

(1) Purpose

(2) Preparation of materials
(3) Common errors in placement

(4) Aseptic techniques

(5) Criteria for dressing removal

(6) Post-operative instructions

3. Cognitive Objective. The student shall know the course content as described above, permitting satisfactory performance of these procedures and accomplishment of the performance goal.

## E. ASSIST IN THE ADMINISTRATION OF NITROUS OXIDE ANALGESIA OR SEDATION

1. Performance Goal. The student shall be able to explain the pharmacology and uses of nitrous oxide, recognize danger signs in nitrous oxide and oxygen administration, assist in the monitoring of equipment and patient with 100 per cent accuracy, and evaluate the patient's condition prior to dismissal.

2. Content. Instruction shall include:

   a. Operatory preparation

   b. Pharmacology of anesthetics

   c. Anesthetic and its uses

   d. Indications and contraindications

   e. Equipment and its operation

   f. Methods of administration

   g. As prescribed by the dentist, obtain proper ratio levels of nitrous oxide to oxygen

   h. Emergency procedures including cardiopulmonary resuscitation and administration of oxygen

   i. Recognize when patient is ready for dismissal

3. Cognitive Objectives. The student shall know how to:

   a. Set up nitrous oxide unit

   b. Understand placement and use of scavenger system

   c. Give proper breathing instructions to patient

   d. Observe patient for signs of problems

e. Emergency procedures, including cardiopulmonary resuscitation and administration of oxygen

f. Give post-operative instructions to patient

g. Chart levels of administration

## F. HOLD ANTERIOR MATRICES

1. Performance Goal. The student shall be able to prepare the armamentarium for holding anterior matrices.

2. Content. Instruction should include:

   a. Armamentarium for anterior matrices

   b. Technique for holding anterior matrices

   c. Types of anterior filling materials

3. Cognitive Objectives. The student shall know the types of anterior matrices and the setting times of anterior restorative materials.

## G. REMOVE SUTURES

1. Performance Goal. The student shall be able to prepare the armamentarium for removing sutures without tissue trauma and unnecessary patient discomfort.

2. Content. Instruction should include:

   a. Armamentarium for removing sutures

   b. Technique of removing sutures

   c. Precautions in removing sutures

3. Cognitive Objective. The student shall know the entire process of suture removal.

## H. APPLY TOPICAL FLUORIDE

1. Performance Goal. The student shall be able to assemble and prepare all the necessary materials for fluoride application, properly isolate and prepare teeth for such treatment, apply topical fluoride to all teeth and relate post-operative instructions to the patient.

2. Content. Instruction should include:

   a. Basic methods of fluoride administration

   b. Factors necessary for optimal uptake of the fluoride solution.

   c. Selection of a patient

   d. Characteristics of various fluoride solutions

   e. Precautions or contraindications related to topical application

   f. Procedure for application of topical fluoride agent

3. Cognitive Objectives. The student shall know:

   a. The ways by which ingested fluoride is incorporated into tooth structure

   b. The difference in location of fluoride ions in tooth enamel as a result of systemic vs. topical administration

   c. Methods by which fluoride can be administered systemically and topically

   d. Steps for topical fluoride application

   e. Chemicals commonly used in combination with fluoride for topical application

   f. Instances for which topical application of fluoride will benefit children in a community with fluoridated water

   g. Post-application instructions to patient

## I. PLACE AND REMOVE RUBBER DAMS

1. Performance Goal. The student shall be able to prepare, place and remove a rubber dam without trauma to the teeth and periodontium or unnecessary discomfort to the patient.

2. Content. Instruction should include:

   a. Rubber dam armamentarium

b. Principles of rubber dam and clamp selection

c. Preparation of the teeth for application of the rubber dam

d. Preparation of the rubber dam

e. Techniques and precautions of placing and removing the rubber dam, ligatures, clamps and precautions

f. Laboratory and clinical practice in placing and removing the rubber dam

3. Cognitive Objectives. The student shall know:

a. Reasons for use of rubber dam

b. Steps of rubber dam placement

c. Criteria for good placement

d. Steps for removal

e. How to explain the procedure to patients

## J. PLACE, WEDGE, AND REMOVE MATRICES

1. PERFORMANCE GOAL. The student shall be able to select, contour, place and remove matrices and wedging materials properly without trauma to the teeth or periodontium.

2. Content. Instruction should include:

a. Principles and techniques of matrix selection, adaptation, contouring and placement

b. Principles and techniques of adapting, contouring and placing wedging materials

c. Principles, techniques, and precautions of removing wedging materials and matrices

d. Laboratory and clinical practice in placing and removing matrices

3. Cognitive Objectives. The student shall know:

a. Reasons for use of matrix band and wedge

b. Types of matrix bands

c. Steps and criteria in placing a Tofflemire or alternative matrix band

d. Placement and removal of matrix bands on different teeth

**K. WITH MOUTH MIRROR, INSPECT THE ORAL CAVITY, CHARTING OBVIOUS LESIONS, EXISTING RESTORATIONS AND MISSING TEETH**

1. Performance Goal. The student shall be able to identify and record deviations from normal clinical features of the oral cavity.

2. Content. Instructions should include:

a. Normal clinical features of the oral cavity

b. Deviations from normal clinical features of the oral cavity

c. Tooth morphology and occlusion classifications

d. Defects in tooth structure and restorations

e. Classification of restorations

f. Clinical appearance of restorative materials

g. Clinical experience in

(1) Identification of normal clinical features of oral cavity

(2) Identification of deviations from normal clinical features of oral cavity

(3) Identification of various occlusions

(4) Charting dental conditions

h. Techniques for palpation of soft tissues to include TMJ

i. Types of tissue changes seen or felt in oral lesions

j. Classification of occlusion--molar relationships used as bases for each class

of malocclusion

k. Completion of medical history forms

3. Cognitive Objectives. The student shall be able to:

a. Identify overbite, crossbite and overjet

b. Use correct fulcrum, chair positions and light

c. Recognize and chart readings

d. Chart missing teeth and existing restorations

e. Identify anterior tooth defects by transillumination

## L. PLACE AND REMOVE TEMPORARY SEDATIVE DRESSINGS (RESTORATION)

1. Performance goal. The student shall be able to prepare, place and remove temporary sedative dressings without tissue trauma and unnecessary patient discomfort.

2. Content. Instruction should include:

a. Armamentarium for placement and removal of temporary sedative dressing.

b. Purposes for using temporary sedative dressing

c. Correct mixing techniques

d. Placement techniques

e. Criteria for establishing correct contours

f. Methods of removal

3. Cognitive Objectives. The student shall know how to mix, place and remove sedative dressings.

## M. TEST PULP VITALITY

1. Performance Goal. The student shall be able to explain the rationale of pulp testing to the patient, be familiar with each pulp testing technique, properly

perform each technique, chart the responses, and respond appropriately to possible patient discomfort.

2. Content. Instruction should include:

   a. Operatory preparation and tray set up

   b. Rationale for pulp testing

   c. Different pulp testing techniques

   d. Responses expected and how to record on chart

3. Cognitive Objectives. The student shall know:

   a. Reasons for pulp testing

   b. Equipment and materials used

   c. Significance of pulp testing responses

## N. DRY CANALS

1. Performance Goal. The student shall know the basics of endodontic treatment and the use of various medications, recognize a dry canal, and be able to place sterile cotton points into the canal.

2. Content. Instruction should include:

   a. Operatory preparation and tray set up

   b. Rationale of endodontic treatment

   c. Understanding use of various medications

   d. Technique of high-velocity vacuum while irrigating canal

   e. How to use paper points in drying of the canals post irrigation

3. Cognitive Objectives. The student shall know:

   a. Reasons for drying canals

   b. Procedures and techniques used

c. Materials and equipment necessary

d. Performance criteria for evaluating a dry canal

## O. PLACE BASES AND LINERS ON SOUND DENTIN

1. Performance Goal. The student shall be able to recognize commonly used cavity liners and bases, know the rationale for their application and limitations, use proper materials, mix materials according to manufacturer's directions, properly place cavity liners and bases, finish a base and cleanse the tooth so that it is ready for the final restoration.

2. Content. Instruction should include:

   a. Operatory preparation and tray set up

   b. Theory and uses of cavity liners and bases

   c. Identification of various cavity liners and bases and their uses and limitations

   d. How to place liners and bases in prepared teeth

   e. How to finish set bases

   f. How to determine whether the tooth is properly lined, based and ready for permanent restoration

3. Cognitive Objectives. The student shall know

   a. Purpose for the placement of bases and liners

   b. Equipment and supplies needed

   c. Procedures and techniques

   d. Materials utilized

   e. Performance criteria for evaluating proper placement of bases and liners

## P. REMOVE EXCESS CEMENT FROM SUPRAGINGIVAL SURFACES OF TEETH

1. Performance Goal. The student shall be able to select and correctly use

appropriate instruments to remove excess cement from coronal surfaces of teeth without trauma to tooth surfaces and adjacent periodontal tissues.

2. Content. Instruction should include:

   a. Tooth morphology and anatomy of the adjacent periodontal tissues

   b. Clinical appearance of clean and smooth coronal surfaces of teeth

   c. Principles of removing excess cement; i.e., selection, care and sharpening of instruments, instrumentation technique and precautions

   d. Practice in:

      (1) Detecting and removing cement

      (2) Evaluating the extent of cement removal

      (3) Sharpening instruments used for removing cement

3. Cognitive Objectives. The student shall know:

   a. Importance of complete removal of excess cement

   b. Instruments used for cement removal

   c. Technique for removal of excess cement from orthodontic bands or from temporary crowns, using a manikin

## Q. SIZE STAINLESS STEEL CROWN, TEMPORARY CROWN AND BANDS

1. Performance Goal. The student shall be able to recognize the indications for stainless steel crowns, use proper materials in recognizing the different types of crowns, select a crown for a specific procedure, select size or fabricate (adapt) crowns to teeth without impinging integrity of the gingiva and occlusion, and dry the site.

2. Content. Instruction should include:

   a. Operatory preparation and tray set up

   b. When and why crowns are used

   c. Identification of the different types of crowns

d. Identification of the instruments needed

f. Adapting crown to tooth and occlusion

3. Cognitive Objectives. The students shall know:

a. Purpose of sizing stainless steel crowns, temporary crowns and bands

b. Fabrication of various custom temporary crowns

c. Equipment and supplies needed

d. Materials utilized

e. Procedures and techniques

f. Performance criteria for evaluation of proper sizing

**R. CEMENT AND REMOVE TEMPORARY CROWNS**

1. Performance Goal. The student shall be able to select the proper temporary crown; trim and contour it until proper occlusion, smooth margins and good adaptation to the tooth are attained; use proper materials; select necessary instruments; properly prepare the site; recognize necessary cements and mix them according to manufacturer's directions; cement crown in place; and check contacts and occlusion.

2. Content. Instructions should include:

a. Operatory preparation and tray set up

b. Identification of the instruments needed

c. Identification and selection of appropriate crowns

d. Adapting the crown to the tooth

e. Site preparation and moisture control

f. Review of the various types of cement which can be used

g. Mixing and placing the cement in the crown

h. How to seat crown, check contacts and occlusion

i. Recognition of excess cement and how to remove it

j. Tissue health and patient comfort

k. How to remove temporary crown and cement

3. Cognitive Objectives. The student shall know:

a. Purpose of temporary cementation and removal of temporary crowns and removal of orthodontic bands

b. Equipment and supplies needed

c. Procedures and techniques used

d. Materials

e. Performance criteria for evaluating proper application

## S. PERFORM ORTHODONTIC PROCEDURES

1. General Performance Goals. The student shall be able to perform the various orthodontic tasks properly and shall know the rationale, terminology, procedures, instrumentation and materials for each.

2. General Cognitive Objectives. The student shall know:

a. The definition of orthodontics and conditions requiring such treatment

b. Classes of malocclusion

c. Causes of dentofacial deformity

d. Types and uses of orthodontic appliances and instruments

e. Goals of orthodontic treatment

f. Procedures, materials and instrumentation of each task

Course Content and Objectives for Each Orthodontic Function

## 1. PLACE AND REMOVE ELASTIC AND NON-ELASTIC SEPARATORS

1. Performance Goal. On a typodont of complete adult dentition the student shall

demonstrate correct operating and fulcrum positions and correct selection and placement of elastic and non-elastic separators in all four quadrants. The student shall be able to chart the procedure.

2. Content: The instructor should include:

   a. Rationale for orthodontic separation

   b. Description of elastic and non-elastic separators

   c. Physical properties of each kind of separators

   d. Indications and contraindications for use of each kind of separator

   e. Advantages and disadvantages of each kind of separator

   f. Procedural description for placement and removal of each kind of separator

   g. Clinical appearance of correctly placed separators

   h. Recording of separator placement

   i. Possible complications from the use of each kind of separator

   j. Instructions to the patient while wearing separators

   k. Clinical appearance of teeth after the removal of separators

   l. Armamentarium and materials needed.

## 2. TAKE INTRA-ORAL MEASUREMENTS FOR ORTHODONTIC PROCEDURES

1. Performance Goal. The student shall be able to measure arch width correctly and accurately record the findings.

2. Content. Instruction shall include:

   a. Materials needed

   b. Purpose and procedures for measurements

   c. Alternative methods of measurements

d. Measurements of overjet and overbite

e. Tooth size discrepancy

**3. SEAT ADJUSTED RETAINERS OR HEADGEARS**

1. Performance Goal. On a typodont the student shall demonstrate the correct insertion and removal procedures for adjusted orthodontic retainers and positioners. The student shall be able to chart the procedures correctly.

2. Content. Instruction should include:

a. Extra-oral force application appliances

(1) Rationale for and principles of use of appliances

(2) Various types of appliances

(3) Principles of action of appliances

(4) Clinical appearance of adjusted appliances

(5) Insertion and removal of adjusted appliances

(6) Patient education and precautions for use of appliance

b. Retainer/Positioners

(1) Rationale for use

(2) Principles of action

(3) Various types

(4) Clinical appearance of adjusted retainers and positioners

(5) Insertion and removal of adjusted appliances

(6) Patient education and precautions for use of appliance

c. Retainer/Positioners

(1) Rationale for use

(2) Principles of action

(3) Various types

(4) Clinical appearance of adjusted retainers and positioners

(5) Insertion and removal

(6) Patient education and precautions for use of retainer/positioners

(7) Armamentarium and materials needed

## 4. CHECK AND REMOVE LOOSE BANDS

1. Performance Goal. On a typodont and using the appropriate armamentarium, the student shall check for and remove loose bands. Student shall be able to chart the procedure.

2. Content. Instruction should include:

   a. Clinical appearance of loose band

   b. Detection of loose bands

   c. Preparation of materials for re-cementation of loose bands

   d. Removal of bands

   e. Hard and soft tissue protection

   f. Armamentarium and materials needed

## 5. REMOVE AND PLACE ARCHWIRES

1. Performance Goal. The student shall be able to identify basic types of archwires and, on a banded and bonded typodont, place, ligate and remove prepared archwires.

2. Content. Instructions should include:

   a. Recognition of basic archwire types

   b. Understanding of basic functions of various archwires

c. Placement, ligation and removal of archwires

## 6. PLACE AND REMOVE LIGATURES

1. Performance Goal. The student shall demonstrate the correct placement and removal of elastic and metal ligatures in all four quadrants.

2. Content. Instruction should include

   a. Armamentarium

   b. Procedure for placement and removal of elastic and metal ligatures

## T. CORONAL POLISHING

1. Performance Goal. The student shall be able to manipulate polishing instruments correctly and remove all plaque and extrinsic stains from exposed surfaces of teeth without trauma to the gingiva or teeth.

2. Content. Instruction should include didactic and clinical experience in:

   a. Principles of plaque and stain formation

   b. Appearance of plaque, instinsic and extrinsic stains and calculus

   c. Clinical appearance of clean and polished teeth

   d. Tooth morphology and anatomy of the oral cavity as they relate to retention of plaque, stain and polishing techniques

   e. Principles of selecting abrasives and polishing agents, including their effect on tooth structure and restorative materials

   f. Principles of polishing; i.e., selection and care of the armamentarium, instrumentation techniques and precautions, including care of mouths and fixed or removable prosthesis and/or orthodontic appliances

   g. Principles for selecting disclosing agents and precautions in their use

3. Cognitive Objectives. The student shall know:

   a. Reasons for doing coronal polishing

b. Criteria for an acceptable coronal polish

c. Effects of improper coronal polish

## U. USE ULTRASONIC SCALER

1. Performance Goal. The student shall be able to explain the procedure to the patient, recognize loose appliances and decalcification, and demonstrate an ability to successfully remove cement from teeth under orthodontic treatment without causing damage to hard or soft tissues and without removal of cement from underneath the appliance.

2. Content. Instruction should include:

   a. Taking and recording health history and vital signs

   b. Review of tooth anatomy, morphology and attachment apparatus

   c. Identification of appropriate armamentarium and equipment

   d. Techniques of cement removal to include fulcrums, instrument grasp, water control and visibility

   e. Effects of ultrasonic scalers on hard and soft tissues of the mouth to include root damage, enamel damage, thermal damage and soft tissue damage

   f. Patient and operatory safety to include systemic medical complications (bacteremia), disease transfer and concerns for patients with pacemakers

   g. Advantages and disadvantages of ultrasonic and conventional methods of cement removal

   h. Adjunctive use of explorer, floss, mirror and toothbrush

   i. Legal aspects including limitations and responsibilities and ramifications of misuse

3. Cognitive Objectives. The student shall know:

   a. Reason for using ultrasonic scaler rather than the conventional method of cement removal

b. Criteria for safe use of ultrasonic scaler

c. Effects of improper use of ultrasonic scaler